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## **BOBCAT HUNTER AND TRAPPER OPINION SURVEY**

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### **ABSTRACT**

*This study was done to investigate characteristics of bobcat hunters and trappers, to determine their hunting and trapping practices, and to determine how these furtakers view the impacts of harvest on bobcat. In addition, hunters and trappers were asked whether they planned to trap bobcats next year in the Northern Lower Peninsula (NLP) and whether they would apply for a Wisconsin bobcat license if allowed. An estimated 2,379 furtakers hunted bobcats and 1,031 furtakers trapped bobcats during the 2003-2004 season in Michigan. Hunters spent about 24,400 days afield hunting bobcats and harvested an estimated 416 bobcats. About 15% of bobcat hunters harvested at least one bobcat. Hunter success was similar in both the Upper Peninsula and NLP. Trappers spent about 26,500 days afield trapping bobcats and harvested an estimated 782 bobcats. About 40% of bobcat trappers harvested at least one bobcat. Hunters most frequently used calls (57%) or dogs (45%) to hunt bobcats. About 31% of the bobcat hunters chose not to harvest the bobcat when they had an opportunity. Most trappers used foothold traps (79%), while 55% of the trappers used conibears (i.e., body gripping traps). Nearly 66% of the furtakers searched most frequently for bobcats in lowland forest habitat. About 42% of bobcat hunters and trappers reported that the bobcat population was stable. About 39% of bobcat hunters and trappers reported that the harvest was at an acceptable level. An estimated 19% of the bobcat hunters and trappers (579 furtakers) that were active in 2003 would be very likely or somewhat likely to trap bobcats in the NLP next year. About 9% of bobcat hunters and trappers (280 furtakers) that were active in 2003 reported that they would be very likely or somewhat likely to apply for a license to hunt or trap bobcats in Wisconsin if permitted.*



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## **INTRODUCTION**

Since 1985, bobcat hunting and trapping regulations in Michigan have changed frequently (Table 1). At the start of this period, the maximum number of bobcats that could be taken per person during hunting and trapping seasons (i.e., bag limit) was unlimited; however, a bag limit of one bobcat per person was established in 1989. From 1989 to 2003, the bag limit and area open to bobcat hunting and trapping generally has increased (Table 1). As regulations have become more liberal, the number of bobcats harvested generally has increased (Figure 1, Table 2).

Bobcat population status and social considerations (i.e., trapper and hunter attitudes) are used when developing trapping and hunting regulations. The primary goal of this study was to determine characteristics of bobcat hunters and trappers (e.g., participation, effort, experience, and harvest), to determine their hunting and trapping practices (e.g., hunting areas, hunting habitat, preferred capture methods, and number of bobcats caught but not harvested), and to determine how these furtakers view the impacts of harvest on bobcat. This information will be used to evaluate existing regulations and to develop future recommendations.

In addition, hunters and trappers were asked whether they planned to trap bobcats next year (2004) in the Northern Lower Peninsula (NLP). In 2004, an additional 11-day trapping season (December 10-20) will be held on private lands in the NLP.

Hunters and trappers also were asked whether they would apply for a license to hunt or trap bobcats in Wisconsin if given an opportunity. Wisconsin currently prohibits nonresidents from hunting or trapping bobcats. As a result of reciprocity agreements, Michigan prohibits Wisconsin residents from hunting or trapping bobcats in Michigan. Wisconsin has been considering allowing nonresidents to hunt and trap bobcats in Wisconsin; however, it is unknown how many current Michigan hunters and trappers might be interested in hunting and trapping bobcats in Wisconsin.

## **METHODS**

Following the 2003 furbearer trapping seasons, a questionnaire was sent to 8,000 randomly selected individuals that had purchased a fur harvester license (Frawley 2004). This represents about 39% of licensees, all of whom had an equal chance of being included in the random sample. From this initial survey, 880 people reported that they had attempted to trap or hunt bobcats in 2003-2004. Among this group, 620 people hunted only, 176 trapped only, and 84 both hunted and trapped bobcats.

In June 2004, a follow-up questionnaire (Appendix A) was sent to these 880 furtakers that had reported attempting to hunt or trap bobcats. As many as two follow-up questionnaires were mailed to nonrespondents. Only four questionnaires were undeliverable. Of the questionnaires that were delivered, 720 (82%) questionnaires were completed and returned.

Estimates from the sample were extrapolated to all bobcat hunters and trappers in 2003, as estimated during the initial fur harvesters survey (Frawley 2004). Estimates were calculated using a simple random sampling design and were presented along with their 95% confidence

limit (CL). In theory, this confidence limit can be added and subtracted from the estimate to calculate the 95% confidence interval (Cochran 1977). The confidence interval is a measure of the precision associated with the estimate and implies that the true value would be within this interval 95 times out of 100. Unfortunately, there are several other possible sources of error in surveys that are probably not evident in calculations of sampling error. They include failure of participants to provide answers (nonresponse bias), question wording, and question order. It is very difficult to measure these biases; thus, estimates were not adjusted for these possible biases.

## RESULTS

An estimated 2,980 furtakers harvested 1,198 bobcats in Michigan during the 2003-2004 season (Table 3). About 25% of bobcat hunters and trappers harvested at least one bobcat. Nearly  $16 \pm 2\%$  of the furtakers took one bobcat,  $4 \pm 1\%$  took two bobcats,  $5 \pm 1\%$  took three bobcats, and less than 1% of these furtakers harvested more than three bobcats.

An estimated 2,379 furtakers hunted bobcats during the 2003-2004 season (Table 3). About 805 furtakers hunted in the Upper Peninsula (UP) and 1,538 hunted in the NLP (Table 4). These hunters had hunted bobcats an average of  $9 \pm 1$  years, and about  $96 \pm 1\%$  of the bobcat hunters were likely to continue hunting bobcat in the future. Bobcat hunters most frequently hunted on public land ( $76 \pm 3\%$ ) (Figure 2). About  $43 \pm 4\%$  of the hunters hunted on private land that was not owned by themselves or their family. While  $37 \pm 4\%$  hunted bobcats on their own land or land owned by their family. About  $25 \pm 3\%$  of the hunters hunted on private land that was open to public hunting (e.g., Commercial Forest Lands). About  $29 \pm 3\%$  of the hunters hunted on public land only,  $23 \pm 3\%$  hunted on private land only, and  $47 \pm 4\%$  hunted on both public and private lands.

Hunters spent about 24,400 days afield hunting bobcats and harvested an estimated 416 bobcats (Table 3). Hunters spent about 9,200 days afield hunting bobcats in the UP and nearly 14,400 days hunting bobcats in the NLP (Table 4). About 15% of bobcat hunters harvested at least one bobcat. Hunter success was similar in both the UP and NLP. An estimated  $13 \pm 3\%$  of the hunters took one bobcat,  $2 \pm 1\%$  took two bobcats, and less than 1% of the hunters harvested three or more bobcats.

Hunters most frequently used calls (57%) or dogs (45%) to hunt bobcats (Table 5). Bobcat hunters participated in an estimated  $6,200 \pm 940$  dog chases of bobcats. About  $31 \pm 4\%$  of the bobcat hunters had an opportunity to harvest a bobcat but chose not to harvest the bobcat. Thus, an estimated  $733 \pm 88$  hunters passed up bobcats on  $2,058 \pm 404$  occasions. Among these hunters that passed up an opportunity to take a bobcat,  $31 \pm 6\%$  passed one bobcat,  $25 \pm 6\%$  passed two bobcats;  $15 \pm 5\%$  passed three bobcats,  $9 \pm 4\%$  passed four bobcats, and  $14 \pm 5\%$  passed five or more bobcats (Figure 3). The estimate of the number of bobcats passed up by hunters should be viewed cautiously because hunting partners may have reported passing the same bobcat; thus, the estimate will be inflated by an unknown amount.

Nearly  $39 \pm 4\%$  of bobcat hunters usually hunted alone while pursuing bobcats, while  $57 \pm 4\%$  of the hunters normally hunted with at least one other hunter (Figure 4). Few bobcat hunters ( $4 \pm 2\%$ ) hired a guide service to assist with their hunting ( $99 \pm 36$  hunters).

An estimated  $1,031 \pm 98$  furtakers trapped bobcats during the 2003-2004 season (Table 3), and the average number of years that these trappers had trapped bobcats was  $10 \pm 1$  years. About  $96 \pm 2\%$  of these trappers were likely to continue trapping bobcat in the future. Bobcat trappers most frequently trapped on public land ( $66 \pm 5\%$ ) (Figure 5). About  $50 \pm 6\%$  trapped bobcats on their own land or land owned by their family. About  $43 \pm 6\%$  of the trappers trapped on private land that was open to public trapping (e.g., Commercial Forest Lands), and  $40 \pm 6\%$  of the trappers trapped on private land that was not owned by themselves or their family. About  $20 \pm 5\%$  of the trappers trapped on public land only,  $34 \pm 5\%$  trapped on private land only, and  $45 \pm 6\%$  trapped on both public and private lands.

Trappers spent about 26,500 days afield trapping bobcats and harvested an estimated 782 bobcats during the 2003-2004 season (Table 3). About 40% of bobcat trappers harvested at least one bobcat. Nearly  $18 \pm 4\%$  of the trappers took only one bobcat,  $9 \pm 3\%$  took two bobcats, and  $14 \pm 4\%$  took three bobcats. About  $16 \pm 4\%$  of the bobcat trappers caught a bobcat in a trap set for another furbearer. Nearly  $9 \pm 3\%$  of the bobcat trappers released  $181 \pm 79$  bobcats from their traps.

Most trappers used foothold traps (79%), while 55% of the trappers used conibears (i.e., body gripping traps) (Table 6). Most trappers preferred to use foothold traps (47%), while 36% preferred to use conibears (Table 7). Relatively few trappers (3%) preferred to use snares, but currently snares are not permitted in Michigan for bobcat. An estimated 13% of trappers did not have a preferred trap type.

Nearly  $67 \pm 3\%$  of the furtakers searched most frequently for bobcats in lowland forest habitat (Table 8). Among lowland forest types, hunters and trappers most often searched for bobcats in brush and mature forest types.

About  $42 \pm 3\%$  of bobcat hunters and trappers reported that the bobcat population was stable (Figure 6). Nearly equal proportions of hunters and trappers indicated that bobcat numbers were increasing ( $17 \pm 3\%$ ), decreasing ( $16 \pm 3\%$ ), or were uncertain about their status ( $22 \pm 3\%$ ). The hunters and trappers' perception of the impacts of harvest on bobcats was similar to their views about the status of bobcats. About  $39 \pm 3\%$  of bobcat hunters and trappers reported that the harvest was at an acceptable level (Figure 7). Nearly equal proportions of hunters and trappers indicated that bobcat were over harvested ( $13 \pm 2\%$ ) as under harvested ( $12 \pm 2\%$ ). About  $34 \pm 3\%$  of the hunters and trappers were uncertain of the impacts of harvest on bobcats.

About 11% of bobcat hunters and trappers that were active in 2003 indicated that they would be very likely to trap bobcats in the NLP next year in the newly created trapping season, and 9% of these furtakers indicated that they would be somewhat likely to participate (Table 9). About 3% of bobcat hunters and trappers that were active in 2003 reported that they would be very likely to apply for a license to hunt or trap bobcats in Wisconsin if permitted, and 7% of these furtakers indicated that they would be somewhat likely to apply for a Wisconsin bobcat license (Table 10).

## DISCUSSION

About 25% of bobcat hunters and trappers harvested at least one bobcat in Michigan in 2003, which was similar to the success rate of hunters and trappers in Wisconsin (26%) (Kitchell and Olson 2003) and in Pennsylvania (28%) in 2002 (Lovallo 2003).

Although there were nearly twice as many bobcat hunters as trappers in Michigan during the 2003-2004 seasons, trappers harvested nearly twice as many bobcats as hunters. Bobcat hunters devoted an average of 59 days of effort per bobcat harvested, while trappers spent about a mean of 34 days of effort per bobcat harvested. Although trappers were more successful at harvesting a bobcat than hunters, more hunters than trappers passed on the opportunity to harvest a bobcat.

Because trapping was restricted to the UP and hunting occurred in both the Upper and Lower Peninsula in 2003, statewide comparison between hunters and trappers could be misleading. A comparison of hunting and trapping success in the UP, where both hunting and trapping were allowed, revealed that trappers were about three times more likely to harvest a bobcat than hunters (40% versus 13% success). On average, UP trappers also took nearly four times as many bobcats per participant as hunters in the UP (0.76 versus 0.20 bobcats per participant). Lovallo (2003) also reported that trapper success was higher than hunter success in Pennsylvania (41% versus 13% success).

Although hunters were less successful than trappers in Pennsylvania, not all hunting methods had the same hunting success. Lovallo (2003) reported that 35% of hunters using dogs were successful, while 11% of hunters using calls were successful. We did not estimate success by hunting method in Michigan because our sample sizes were too small to produce precise estimates.

Nearly 9% of the bobcat trappers in Michigan released a bobcat from their traps set during the 2003-2004 season. In comparison, 4% of Wisconsin bobcat trappers released a bobcat from their traps during the Wisconsin 2002 season (Kitchell and Olson 2003).

Nearly 67% of the furtakers most commonly searched for bobcats in lowland forest habitat. Bobcat hunters and trappers in Wisconsin also reported that lowland forest habitat was the habitat type that they most often hunted or trapped bobcat (Kitchell and Olson 2003).

We estimated that about 579 bobcat hunters and trappers that were active in 2003 would be very likely or somewhat likely to trap bobcats in the NLP next year. Our estimate included only a small percentage of the number of people that may trap bobcats in the NLP next year because it only included bobcat hunters and trappers that were active in 2003. In contrast, Bull and Peyton (2003) estimated that about 5,200 furtakers that were active in 2002 were very likely or somewhat likely to trap bobcats in the NLP. This latter estimate was obtained from responses from a random sample of all furtakers that purchased a license in 2002.

Beginning with the 2004-2005 bobcat season, all licensed furtakers attempting to harvest a bobcat in Michigan will be required to obtain a free bobcat permit from the Michigan Department of Natural Resources (DNR). The list of furtakers obtaining this permit will form a complete list of bobcat hunters and trappers statewide. Using this list, the DNR will be able to

design future surveys that provide more precise estimates, and this should help improve bobcat management in Michigan.

## **ACKNOWLEDGEMENTS**

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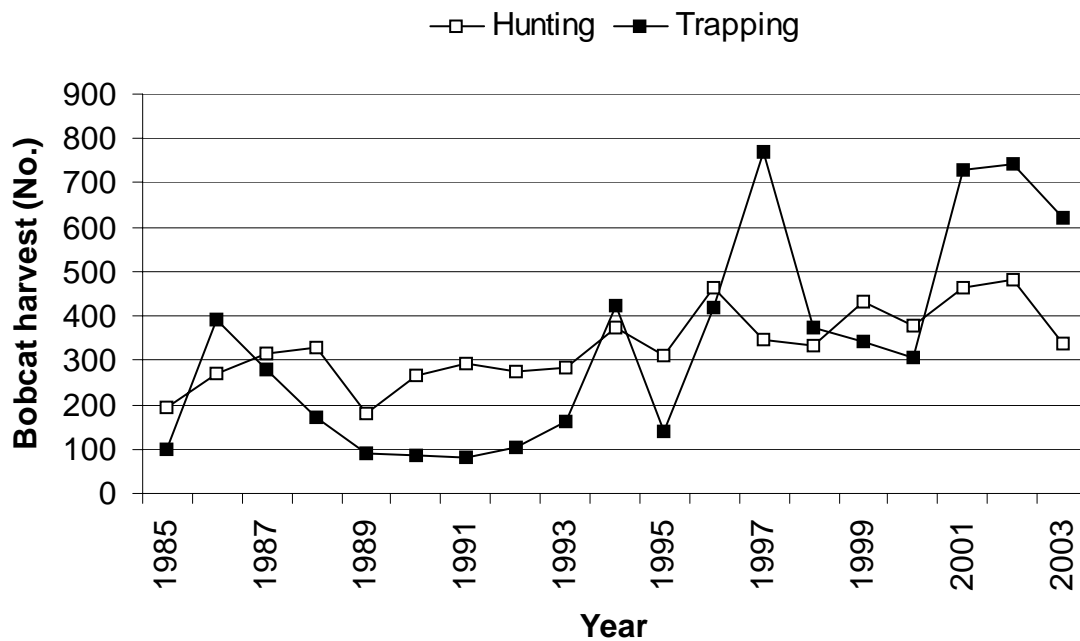


Figure 1. The number of bobcat registered by hunters and trappers in Michigan 1985-2003. All furtakers harvesting a bobcat were required to present these animals at a DNR office for registration.

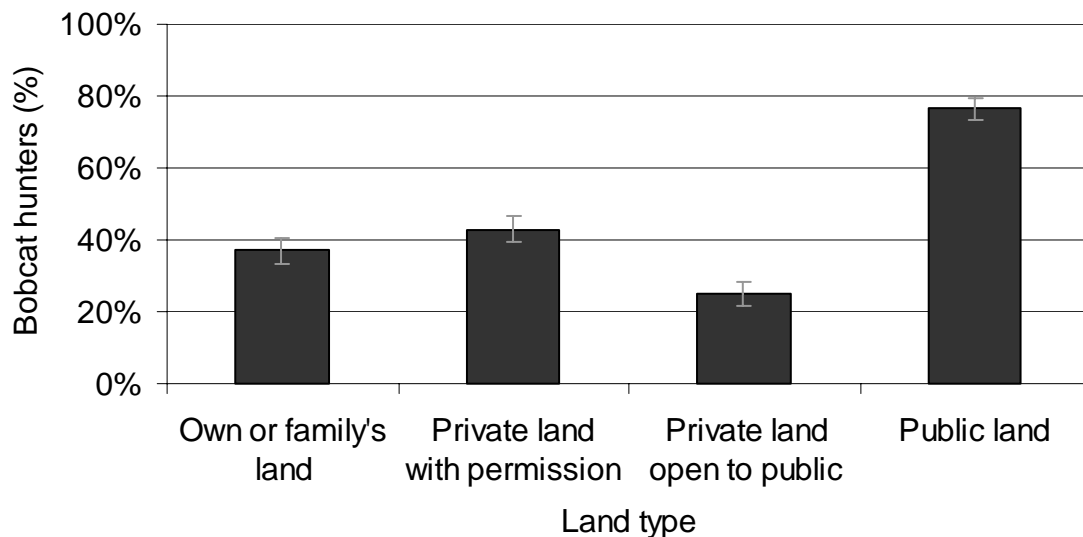


Figure 2. The land type that hunters normally hunted for bobcats in Michigan. The sum of all the land types was greater than 100% because furtakers could select more than one land type.

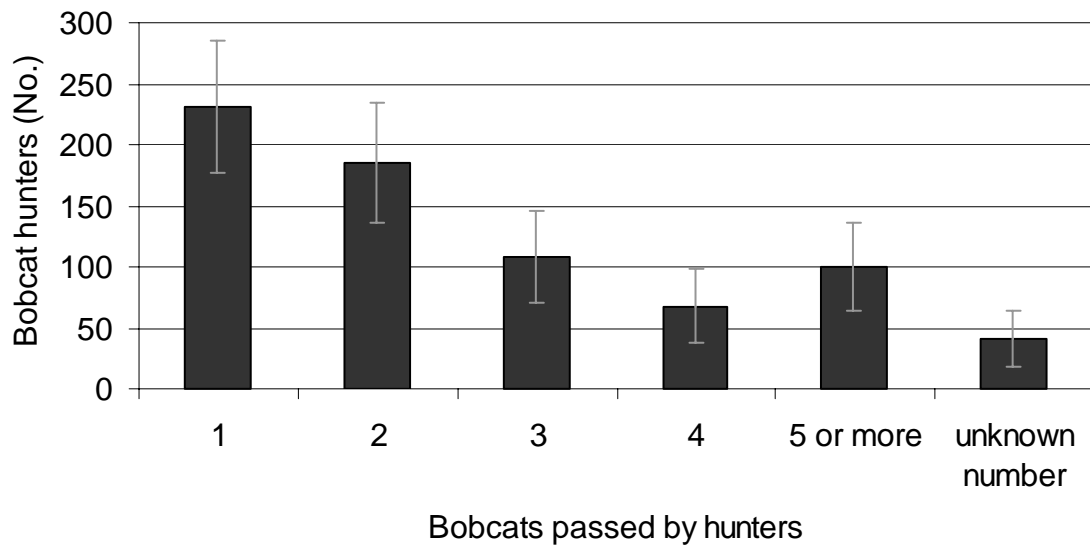


Figure 3. The number of bobcat hunters that passed up an opportunity to harvest a bobcat in Michigan, 2003-2004, summarized by the number of bobcats passed.

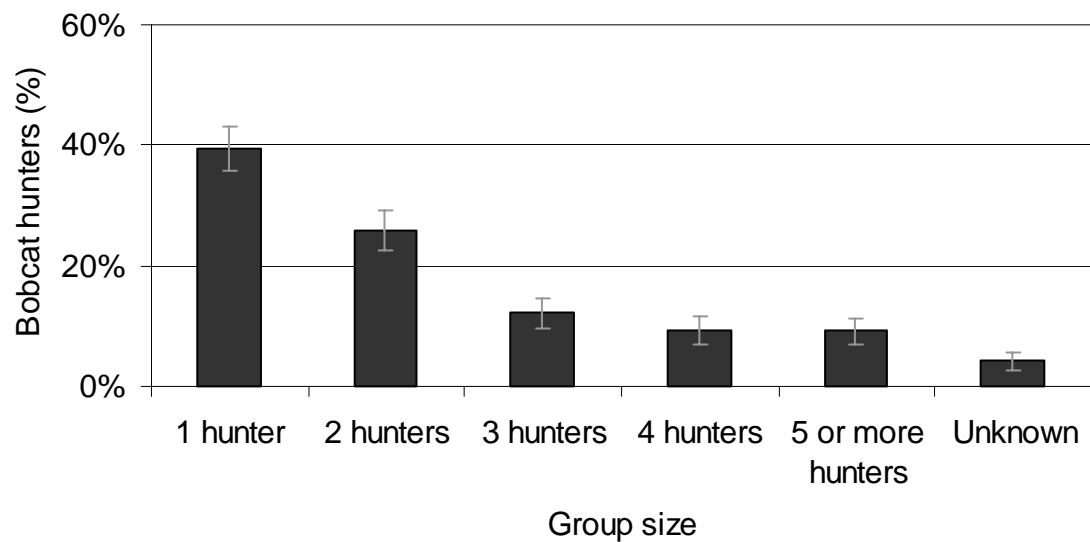


Figure 4. Bobcat hunting party size in Michigan, 2003-2004.



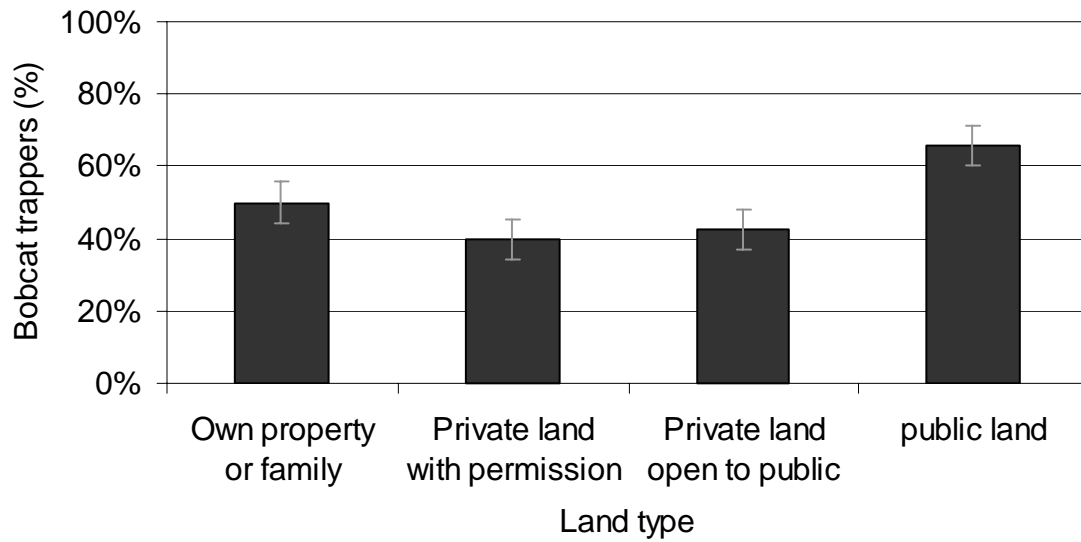


Figure 5. The land type that trappers normally trapped for bobcats in Michigan, 2003-2004.

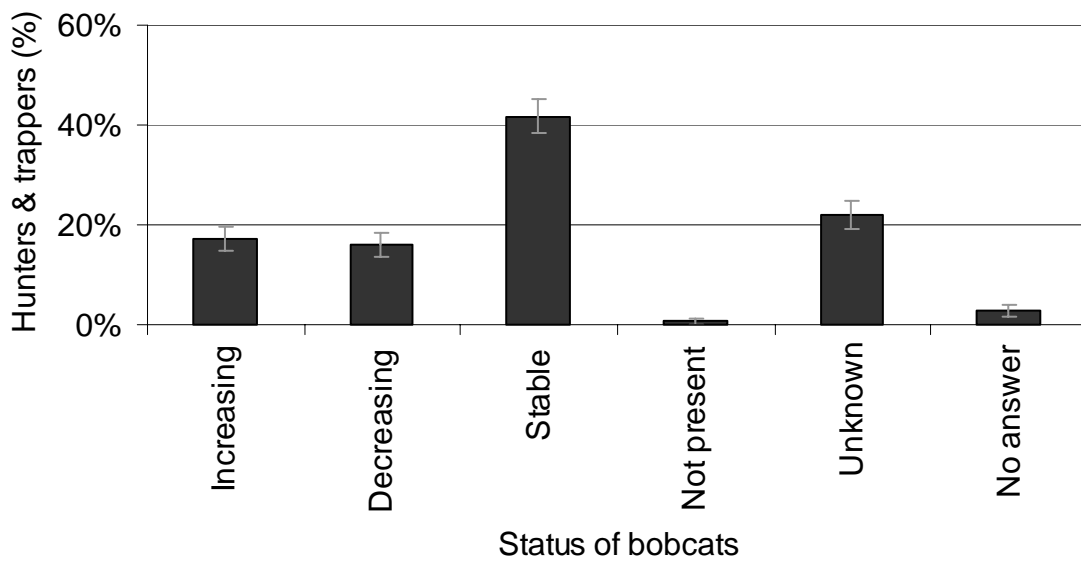


Figure 6. Status of bobcats in Michigan as described by bobcat hunters and trappers.

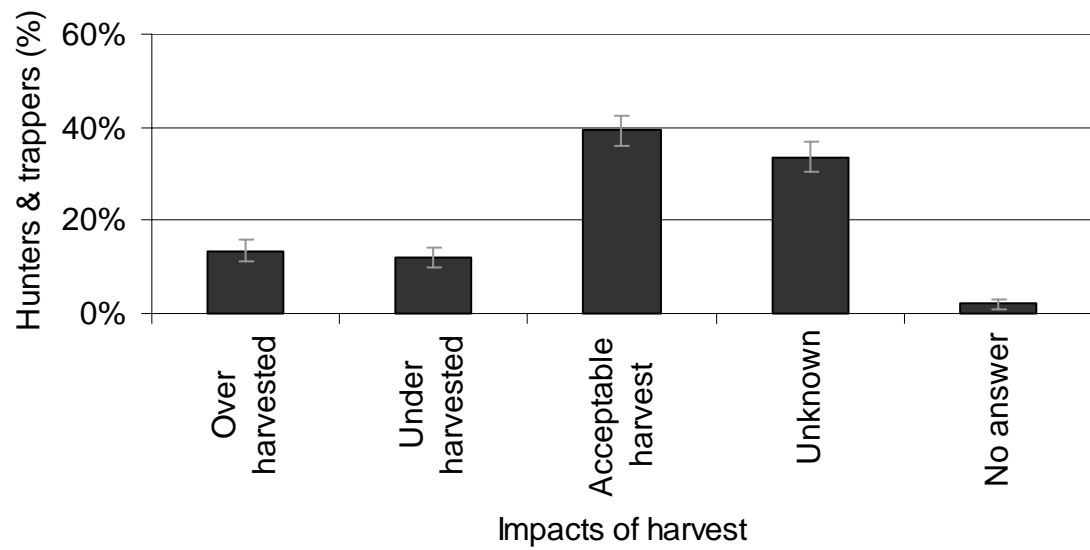


Figure 7. Impacts of hunting and trapping on bobcats in Michigan as described by bobcat hunters and trappers.

Table 1. Resident bobcat trapping and hunting season dates and seasonal bag limits in Michigan, 1985-2003.

| Year | State-wide bag limit <sup>a</sup> | Trapping season zones        |                        |                 |                        | Hunting season zones         |                        |                 |                        |                    |              |                    |
|------|-----------------------------------|------------------------------|------------------------|-----------------|------------------------|------------------------------|------------------------|-----------------|------------------------|--------------------|--------------|--------------------|
|      |                                   | Upper Peninsula <sup>b</sup> |                        | Drummond Island |                        | Upper Peninsula <sup>b</sup> |                        | Drummond Island |                        | Lower Peninsula    |              |                    |
|      |                                   | Season dates                 | Bag limit <sup>a</sup> | Season dates    | Bag limit <sup>a</sup> | Season dates                 | Bag limit <sup>a</sup> | Season dates    | Bag limit <sup>a</sup> | North <sup>c</sup> |              | South <sup>d</sup> |
|      |                                   |                              |                        |                 |                        |                              |                        |                 |                        | Season dates       | Season dates |                    |
| 1985 | None                              | 10/25-3/1                    | None                   | Closed          | 0                      | 10/25-3/1                    | None                   | Closed          | 0                      | 1/1-3/1            | NA           | None               |
| 1986 | None                              | 10/25-3/1                    | None                   | Closed          | 0                      | 10/25-3/1                    | None                   | Closed          | 0                      | 1/1-3/1            | NA           | None               |
| 1987 | None                              | 10/25-3/1                    | None                   | Closed          | 0                      | 10/25-3/1                    | None                   | Closed          | 0                      | 1/1-3/1            | NA           | None               |
| 1988 | None                              | 10/25-3/1                    | None                   | Closed          | 0                      | 10/25-3/1                    | None                   | Closed          | 0                      | 1/1-3/1            | NA           | None               |
| 1989 | 1                                 | 10/25-3/1                    | 1                      | Closed          | 0                      | 10/25-3/1                    | 1                      | Closed          | 0                      | 1/1-3/1            | 1/1-2/1      | 1                  |
| 1990 | 1                                 | 10/25-3/1                    | 1                      | Closed          | 0                      | 10/25-3/1                    | 1                      | Closed          | 0                      | 1/1-3/1            | 1/1-2/1      | 1                  |
| 1991 | 1                                 | 10/25-3/1                    | 1                      | Closed          | 0                      | 10/25-3/1                    | 1                      | Closed          | 0                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 1992 | 1                                 | 10/25-3/1                    | 1                      | Closed          | 0                      | 10/25-3/1                    | 1                      | Closed          | 0                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 1993 | 1                                 | 10/25-3/1                    | 1                      | Closed          | 0                      | 10/25-3/1                    | 1                      | Closed          | 0                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 1994 | 2                                 | 10/25-3/1                    | 2                      | Closed          | 0                      | 10/25-3/1                    | 2                      | Closed          | 0                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 1995 | 2                                 | 10/25-3/1                    | 2                      | 10/25-3/1       | 1                      | 10/25-3/1                    | 2                      | 10/25-3/1       | 1                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 1996 | 3                                 | 10/25-3/1                    | 3                      | 10/25-3/1       | 1                      | 10/25-3/1                    | 3                      | 10/25-3/1       | 1                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 1997 | 3                                 | 10/25-3/1                    | 3                      | 10/25-3/1       | 1                      | 10/25-3/1                    | 3                      | 10/25-3/1       | 1                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 1998 | 3                                 | 10/25-3/1                    | 3                      | 10/25-3/1       | 1                      | 12/1-3/1                     | 3                      | 10/25-3/1       | 1                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 1999 | 3                                 | 10/25-3/1                    | 3                      | 10/25-3/1       | 1                      | 12/1-3/1                     | 3                      | 10/25-3/1       | 1                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 2000 | 3                                 | 10/25-3/1                    | 3                      | 10/25-3/1       | 1                      | 12/1-3/1                     | 3                      | 10/25-3/1       | 1                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 2001 | 3                                 | 10/25-3/1                    | 3                      | 10/25-3/1       | 1                      | 12/1-3/1                     | 3                      | 10/25-3/1       | 1                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 2002 | 3                                 | 10/25-3/1                    | 3                      | 10/25-3/1       | 1                      | 12/1-3/1                     | 3                      | 10/25-3/1       | 1                      | 1/1-3/1            | 1/15-2/16    | 1                  |
| 2003 | 3                                 | 10/25-3/1                    | 3                      | 10/25-3/1       | 1                      | 12/1-3/1                     | 3                      | 10/25-3/1       | 1                      | 1/1-3/1            | 1/15-2/16    | 1                  |

<sup>a</sup>The statewide bag limit was the maximum number of bobcats that could be taken per person from all zones (hunting and trapping combined), and the bag limit for each zone was the maximum number that could be taken within a zone (hunting and trapping combined).

<sup>b</sup>Excluded Bois Blanc Island during 1985-1988 and Drummond Island in the Upper Peninsula.

<sup>c</sup>During 1985-1988, the North Zone included Alcona, Alpena, Antrim, Charlevoix, Cheboygan, Clare, Emmet, Montmorency, Oscoda, Otsego, and Presque Isle counties. Roscommon county was added during 1985-1986, and Arenac, Crawford, Gladwin, Iosco, Kalkaska, Missaukee, Ogemaw, Osceola, and Roscommon counties were added in 1988. During 1989-2003, the North Zone included Alpena, Antrim, Charlevoix, Cheboygan, Emmet, Montmorency, Otsego, and Presque Isle. Alcona and Oscoda counties were added during 1991-2003.

<sup>d</sup>The South Zone did not exist before 1989. During 1989-2003, the South Zone included Clare, Crawford, Gladwin, Iosco, Kalkaska, Missaukee, Ogemaw, Osceola, Roscommon, and Wexford counties, and Arenac County west of Highway I-75 and north of Highway M-61. The South Zone also included Alcona and Oscoda counties during 1989-1990.

Table 2. Number of bobcats registered by hunters and trappers in Michigan, 1985-2003. All furtakers harvesting a bobcat were required to present these animals at a DNR office for registration.

| Year              | Trappers | Hunters | Unknown furtaker | Total number of bobcats registered |
|-------------------|----------|---------|------------------|------------------------------------|
| 1985              | 100      | 193     | 14               | 307                                |
| 1986              | 390      | 268     | 11               | 669                                |
| 1987              | 277      | 315     | 5                | 597                                |
| 1988              | 170      | 327     | 0                | 497                                |
| 1989              | 91       | 178     | 0                | 269                                |
| 1990              | 85       | 266     | 0                | 351                                |
| 1991              | 79       | 292     | 0                | 371                                |
| 1992              | 104      | 276     | 0                | 380                                |
| 1993              | 163      | 285     | 0                | 448                                |
| 1994              | 422      | 373     | 0                | 795                                |
| 1995              | 138      | 311     | 1                | 450                                |
| 1996              | 420      | 463     | 0                | 883                                |
| 1997              | 771      | 347     | 0                | 1,118                              |
| 1998              | 375      | 331     | 0                | 706                                |
| 1999              | 343      | 434     | 0                | 777                                |
| 2000              | 307      | 379     | 0                | 686                                |
| 2001              | 728      | 464     | 0                | 1,192                              |
| 2002              | 741      | 482     | 0                | 1,223                              |
| 2003 <sup>a</sup> | 621      | 339     | 0                | 960                                |

<sup>a</sup>Preliminary totals.

Table 3. Estimated number of participants and their days afield (effort), harvest of bobcats, and success during the 2003-2004 bobcat hunting and trapping seasons in Michigan.

| Group    | Active participants <sup>a</sup> |        | Effort |        | Harvest <sup>b</sup> |        | Success <sup>c</sup> |        | Harvest per participant |        |
|----------|----------------------------------|--------|--------|--------|----------------------|--------|----------------------|--------|-------------------------|--------|
|          | Total                            | 95% CL | Total  | 95% CL | Total                | 95% CL | %                    | 95% CL | Mean                    | 95% CL |
| Hunters  | 2,379                            | 93     | 24,438 | 2,996  | 416                  | 90     | 15                   | 3      | 0.17                    | 0.04   |
| Trappers | 1,031                            | 98     | 26,478 | 4,482  | 782                  | 148    | 40                   | 6      | 0.76                    | 0.12   |
| Combined | 2,980                            | 58     | 50,916 | 5,148  | 1,198                | 166    | 25                   | 3      | 0.40                    | 0.06   |

<sup>a</sup>Furtakers that actually went afield to hunt or trap bobcats.

<sup>b</sup>Harvest estimate from survey; see Table 2 for the number of bobcats registered.

<sup>c</sup>Proportion of participants that harvested at least one bobcat.

Table 4. Estimated number of participants and their days afield (effort), harvest of bobcats, and success during the 2003-2004 bobcat hunting and trapping seasons in Michigan, summarized by region.

| Group and region | Active participants <sup>a</sup> |        | Effort |        | Harvest <sup>b</sup> |        | Success <sup>c</sup> |        | Harvest per participant |        |
|------------------|----------------------------------|--------|--------|--------|----------------------|--------|----------------------|--------|-------------------------|--------|
|                  | Total                            | 95% CL | Total  | 95% CL | Total                | 95% CL | %                    | 95% CL | Mean                    | 95% CL |
| Hunters          |                                  |        |        |        |                      |        |                      |        |                         |        |
| UP               | 805                              | 91     | 9,171  | 1,981  | 163                  | 67     | 13                   | 4      | 0.20                    | 0.08   |
| NLP              | 1,538                            | 105    | 14,381 | 2,297  | 253                  | 57     | 16                   | 3      | 0.16                    | 0.04   |
| Unknown          | 176                              | 48     | 886    | 418    | 0                    | 0      | 0                    | 0      | 0.00                    | 0.00   |
| Trappers         |                                  |        |        |        |                      |        |                      |        |                         |        |
| UP               | 1,031                            | 98     | 26,478 | 4,482  | 782                  | 148    | 40                   | 6      | 0.76                    | 0.12   |
| Combined         |                                  |        |        |        |                      |        |                      |        |                         |        |
| UP               | 1,583                            | 105    | 35,649 | 4,971  | 945                  | 160    | 32                   | 4      | 0.60                    | 0.09   |
| NLP              | 1,538                            | 105    | 14,381 | 2,297  | 253                  | 57     | 16                   | 3      | 0.16                    | 0.04   |
| Unknown          | 176                              | 48     | 886    | 418    | 0                    | 0      | 0                    | 0      | 0.00                    | 0.00   |

<sup>a</sup>Furtakers that actually went afield to hunt or trap bobcats.

<sup>b</sup>Estimate from survey; see Table 2 for the number of bobcats registered.

<sup>c</sup>Proportion of participants that harvested at least one bobcat.

Table 5. Proportion and number of hunters that used various hunting methods to hunt bobcats in Michigan during the 2003-2004 season.

| Hunting method and frequency of use | %  | 95% CL | Number | 95% CL |
|-------------------------------------|----|--------|--------|--------|
| Dogs                                |    |        |        |        |
| Occasionally                        | 6  | 2      | 145    | 43     |
| Usually                             | 5  | 2      | 113    | 38     |
| Always                              | 35 | 4      | 823    | 91     |
| Total                               | 45 | 4      | 1,081  | 99     |
| Calls                               |    |        |        |        |
| Occasionally                        | 10 | 2      | 244    | 55     |
| Usually                             | 8  | 2      | 185    | 49     |
| Always                              | 39 | 4      | 932    | 95     |
| Total                               | 57 | 4      | 1,361  | 104    |
| Incidental                          |    |        |        |        |
| Occasionally                        | 9  | 2      | 222    | 53     |
| Usually                             | 3  | 1      | 72     | 31     |
| Always                              | 3  | 1      | 81     | 33     |
| Total                               | 16 | 3      | 375    | 67     |

Table 6. Trap type used by bobcat trappers in the 2003-2004 season in Michigan.

| Trap type      | Trappers (%) | 95% CL | Trappers (No.) | 95% CL |
|----------------|--------------|--------|----------------|--------|
| Foothold traps | 79           | 5      | 809            | 91     |
| Conibears      | 55           | 6      | 570            | 80     |
| Other          | 1            | 1      | 9              | 11     |

Table 7. Preferred trap type of bobcat trappers in Michigan.

| Trap type      | Trappers (%) | 95% CL | Trappers (No.) | 95% CL |
|----------------|--------------|--------|----------------|--------|
| Foothold traps | 47           | 6      | 484            | 75     |
| Conibears      | 36           | 6      | 371            | 67     |
| Snares         | 3            | 2      | 27             | 19     |
| No preference  | 13           | 4      | 136            | 42     |
| No answer      | 1            | 1      | 14             | 14     |

Table 8. Habitat type that hunters and trappers most frequently searched for bobcats in the 2003-2004 season in Michigan.

| Habitat type                                    | Furtakers |        | Furtakers |        |
|---|-----------|--------|-----------|--------|
|   | (%)       | 95% CL | (No.)     | 95% CL |
| Upland pine or spruce – regeneration or brush   | 2         | 1      | 72        | 31     |
| Upland pine or spruce – thinned or pole-sized   | 2         | 1      | 50        | 26     |
| Upland pine or spruce – large or mature         | 2         | 1      | 59        | 28     |
| Lowland forest or swamp – regeneration or brush | 27        | 3      | 814       | 91     |
| Lowland forest or swamp – thinned or pole-sized | 10        | 2      | 303       | 61     |
| Lowland forest or swamp – large or mature       | 29        | 3      | 864       | 93     |
| Upland hardwoods – regeneration or brush        | 1         | 1      | 18        | 16     |
| Upland hardwoods – thinned or pole-sized        | 2         | 1      | 50        | 26     |
| Upland hardwoods – large or mature              | 1         | 1      | 41        | 23     |
| No answer                                       | 24        | 3      | 710       | 87     |

Table 9. Likelihood that bobcat hunters and trappers would trap bobcats in the NLP in Michigan in 2004.

| Response          | Furtakers (%) | 95% CL | Furtakers (No.) | 95% CL |
|-------------------|---------------|--------|-----------------|--------|
| Very likely       | 11            | 2      | 321             | 63     |
| Somewhat likely   | 9             | 2      | 258             | 57     |
| Not very likely   | 13            | 2      | 375             | 67     |
| Not at all likely | 63            | 3      | 1,877           | 104    |
| Not sure          | 3             | 1      | 99              | 36     |
| No answer         | 2             | 1      | 50              | 26     |

Table 10. Likelihood that Michigan bobcat hunters and trappers would apply for a permit to hunt or trap bobcats in Wisconsin if allowed.

| Response          | Furtakers (%) | 95% CL | Furtakers (No.) | 95% CL |
|-------------------|---------------|--------|-----------------|--------|
| Very likely       | 3             | 1      | 77              | 32     |
| Somewhat likely   | 7             | 2      | 204             | 51     |
| Not very likely   | 19            | 3      | 556             | 79     |
| Not at all likely | 67            | 3      | 1,999           | 102    |
| Not sure          | 4             | 1      | 118             | 39     |
| No answer         | 1             | 1      | 27              | 19     |

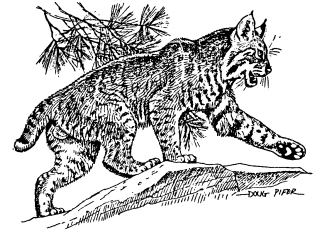
Appendix A. The questionnaire sent to a sample of bobcat hunters and trappers in this study.





# BOBCAT HUNTER AND TRAPPER SURVEY

This information is requested under authority of Part 435, 1994 PA 451, M.C.L. 324.43539.



- It is important that you complete and return this questionnaire even if you did not harvest a bobcat during the most recent hunting and trapping seasons.
- Only the person this questionnaire was addressed to should answer these questions.

## PART A: Hunting Questions

1. Did you hunt bobcats during the 2003-04 season?

- <sup>1</sup> ☐ Yes                      <sup>2</sup> ☐ No (*Skip to Question #9*)

2. About how many years have you hunted bobcats? \_\_\_\_\_ Years

3. How likely is it that you will continue to hunt bobcats in Michigan in the next 5 years?

- <sup>1</sup> ☐ Very likely      <sup>2</sup> ☐ Somewhat likely      <sup>3</sup> ☐ Not very likely      <sup>4</sup> ☐ Not at all likely      <sup>5</sup> ☐ Not sure

4. What is your preferred county to hunt bobcats? \_\_\_\_\_

5. On what lands do you hunt bobcats in most years? (*You may check more than one.*)

- <sup>1</sup> ☐ Property owned by me or my family      <sup>2</sup> ☐ Private land, with permission  
<sup>3</sup> ☐ Private land open to public hunting (For example, Commercial Forests, Hunter Access Program)      <sup>4</sup> ☐ Public land (State Game Area, State or National Forest, etc.)

6. About how many bobcat chases with dogs were you involved with in the 2003-04 season? \_\_\_\_\_ Chases

7. Did you intentionally choose not to harvest any bobcats that were within range of your gun or bow while hunting in the 2003-04 season? For example, did you call a bobcat within range or tree a bobcat but then choose not to harvest it?

- <sup>1</sup> ☐ Yes (Please indicate the number of bobcats passed up \_\_\_\_\_)      <sup>2</sup> ☐ No

8. Do you usually hunt bobcats alone or with partners?

- <sup>1</sup> ☐ Hunt alone      <sup>2</sup> ☐ Hunt with other people (Indicate average number in group \_\_\_\_\_)

## PART B: Trapping Questions

9. Did you attempt to harvest a bobcat while trapping in the 2003-04 season?

- <sup>1</sup> ☐ Yes                      <sup>2</sup> ☐ No (*Skip to Question #18*)

10. About how many years have you trapped bobcats? \_\_\_\_\_ Years

11. How likely is it that you will continue to trap bobcats in Michigan in the next 5 years?

- <sup>1</sup> ☐ Very likely      <sup>2</sup> ☐ Somewhat likely      <sup>3</sup> ☐ Not very likely      <sup>4</sup> ☐ Not at all likely      <sup>5</sup> ☐ Not sure

12. What is your preferred county to trap bobcats? \_\_\_\_\_
13. On what lands do you trap bobcats in most years? (You may check more than one.)
- ☐ Property owned by me or my family

☐ Private land open to public hunting  
(For example, Commercial Forests,  
Hunter Access Program)

☐ Private land, with permission

☐ Public land (State Game Area, State or  
National Forest, etc.)
14. Which capture method did you use when you attempted to harvest bobcats in the 2003-04 season? (Check all that apply.)
- ☐ Foothold traps

☐ Conibears

☐ Other (please specify \_\_\_\_\_)
15. Which capture method do you prefer to catch bobcats? (Check one.)
- ☐ Foothold traps

☐ Snares

☐ Conibears

☐ No preference
16. Did you catch any bobcats in traps that were set for another species in the 2003-04 season?
- ☐ Yes

☐ No
17. Did you release any bobcats from your traps in the 2003-04 season?
- ☐ Yes (Please indicate the number of bobcats released \_\_\_\_\_)

☐ No

PART C: General Questions

18. In which habitat type did you hunt or trap for bobcat most frequently in the 2003-04 season? (Check one.)
- | Upland Pine or Spruce  | Lowland Forest or Swamp  | Upland Hardwoods   |
|--|--|--|
| <div><div><input type="checkbox"/> Regeneration or brush</div><div><input type="checkbox"/> Thinned or pole-sized</div><div><input type="checkbox"/> Large or mature</div></div> | <div><div><input type="checkbox"/> Regeneration or brush</div><div><input type="checkbox"/> Thinned or pole-sized</div><div><input type="checkbox"/> Large or mature</div></div> | <div><div><input type="checkbox"/> Regeneration or brush</div><div><input type="checkbox"/> Thinned or pole-sized</div><div><input type="checkbox"/> Large or mature</div></div> |
19. Compared to the previous three years, what is the status of bobcats in the county that you prefer to hunt or trap bobcats in the 2003-04 season?
- ☐ Increasing

☐ Decreasing

☐ Stable

☐ Not present

☐ Unknown
20. How would you describe the impacts of hunters and trappers on the bobcat population in the county that you prefer to hunt or trap bobcats in the 2003-04 season?
- ☐ Over  
harvested

☐ Under  
harvested

☐ Harvest at an  
acceptable level

☐ Unknown
21. Next year bobcats can be trapped December 10-20 on private lands in the northern Lower Peninsula (NLP). Two bobcats can be taken in the Upper Peninsula and NLP, however, only one of these bobcats can be taken from the NLP. How likely is it that you would trap bobcats in the NLP next year? (Check one.)
- ☐ Very likely

☐ Somewhat  
likely

☐ Not very  
likely

☐ Not at all  
likely

☐ Not sure
22. Currently, Michigan bobcat hunters and trappers cannot harvest bobcats in Wisconsin. If Michigan residents could harvest bobcats in Wisconsin, they would need to apply for a limited number of harvest tags, and the maximum number of bobcats that could be taken is one. How likely is it that you would apply for a harvest tag in Wisconsin if Michigan residents were allowed to hunt or trap bobcats in Wisconsin? (Check one.)
- ☐ Very likely

☐ Somewhat  
likely

☐ Not very  
likely

☐ Not at all  
likely

☐ Not sure